NEW BOOKS.

Differential and Integral Calculus. By LORRAIN S. HULBURT. New York: Longmans, Green, and Company. Pp. 481.

This book is intended for use in colleges and technical schools and is rather carefully written. It contains many excellent features which will appeal to the teacher and is one of the best books for the purpose that has come to our attention. It would seem, however, that too many writers on the calculus have aimed to meet the requirements of these two classes of students and in so doing have not entirely satisfied the desires of either. The teacher of the arts students will want to omit a good deal that the engineering students will want and *vice versa*. While the theory of the calculus is the same for all we believe it would be more satisfactory under present conditions to have a separate book for each class of students.

Elements of Trigonometry with Tables. By DANIEL A. MURRAY. New York: Longmans, Green, and Company. Pp. 231. $1.00 net.

In some respects this book is an abridgment of the author's " Elements of Trigonometry " with some rearrangement of chapters. For most teachers we believe it will be found an improvement on the earlier book, though the increased use of the unit circle and line functions is not desirable. Some teachers, however, may desire this increased use of line functions and for them it will be an improvement. It would appear to be a very teachable book for those who desire to begin with a treatment of acute angles.

Elements of Applied Mathematics. By HERBERT E. COBB. Boston: Ginn & Company. Pp. 274. $1.00.

This book is constructed on the principle that arithmetic, algebra, and geometry are closely linked together. The work outlined consists largely of lists of problems based on the student's preceding work in mathematics, illustrating the work in the shops and laboratories, and of simple experiments and exercises in the mathematics classroom, where the pupil, by measuring and weighing, secures his own data for numerical computations and geometrical constructions.

The College Engineering Notebook. By ROBERT E. MORITZ. Boston: Ginn & Company. $1.00.

This notebook is designed for the use of students in civil, mechanical, and electrical engineering. It contains ninety sheets of high-grade rectangular-co-ordinate paper, five sheets of polar-co-ordinate paper, and five sheets of logarithmic-co-ordinate paper. The reverse side of each sheet is ruled horizontally with vertical crosslines at intervals of two and one half centimeters. This arrangement adapts each sheet

equally well for computation purposes, for the construction of graphs, and for ordinary use.

Additional features of the book are lists of the most important mathematical formulas from algebra, geometry, trigonometry, analytics, and the calculus. These are followed by separate pages of carefully selected formulas from mechanics, surveying, strength of materials, mechanism, machine design, thermodynamics, electricity, and magnetism. The back part of the book contains a four-place table of logarithms, and short tables of natural logarithms, trigonometric functions, exponential functions, squares and square roots, cubes and cube roots, reciprocals, and hyperbolic functions. Finally, it contains eight sets of type curves.

Complete School Algebra. By H. E. HAWKES, W. A. LUBY, F. C. TOUTON. Boston: Ginn and Company. Pp. 507. $1.25.

The "Complete School Algebra," which includes between the covers of a single volume—with the necessary adaptation and abridgment—all the material of the authors' "First Course in Algebra" and "Second Course in Algebra," is designed for those schools which find a one-book course best suited to their needs.

The first twenty-three chapters contain the greater portion of the work usually taken up during the first year. Then follows the review material, each topic being given a broader and more advanced treatment than is permissible in first-year work. New matter is used throughout, and many new applications are given in order to make a fresh and inviting appeal to the student. In the remaining chapters those advanced topics considered necessary by the best secondary schools are included.

First Principles of Algebra. By H. E. SLAUGHT and N. J. LENNES. Boston: Allyn and Bacon. Pp. 280.

The authors in writing this book have kept two aims before them: (1) To provide a gradual and natural introduction to the symbols and processes of algebra. (2) To give vital purpose to the study of algebra by using it to do interesting and valuable things. The equation is introduced and developed early, and the principles are codified in a few short rules. It is an interesting and carefully written book.

First Year Algebra. By WEBSTER WELLS and WALTER W. HART. Boston: D. C. Heath and Company. Pp. 340. 90 cents.

This book shows some new blood has been infused into the older editions of Wells's book. It contains several excellent features and a student who had carefully completed it would have a good introduction to algebra.

Durell's School Algebra. By FLETCHER DURELL. New York: Charles E. Merill Co. Pp. 507. $1.10.

This is an attractive and interesting book. Its pages are well spaced and give an effect of simplicity to the text.